10/643,151

(FILE 'HOME' ENTERED AT 18:37:11 ON 08 MAY 2006)

FILE 'CAPLUS' ENTERED AT 18:37:27 ON 08 MAY 2006

```
L1             6 S PHOTO-ALKYLATION
L2            48 S PHOTOLYSIS AND METAL ALKYL
L3             0 S L2 AND CARBOXYLIC ACID
L4             0 S L2 AND ORGANIC ACID
L5             0 S L2 AND FORMIC ACID
L6             0 S L2 AND ACETIC ACID

=> s metal alkyl and organic acid
       1644131 METAL
        567045 ALKYL
          1739 METAL ALKYL
                 (METAL(W)ALKYL)
        352091 ORGANIC
       4142789 ACID
          3358 ORGANIC ACID
                 (ORGANIC(W)ACID)
L7             0 METAL ALKYL AND ORGANIC ACID

=> s metal alkyl and carboxylic acid
       1644131 METAL
        567045 ALKYL
          1739 METAL ALKYL
                 (METAL(W)ALKYL)
        237385 CARBOXYLIC
       4142789 ACID
        132188 CARBOXYLIC ACID
                 (CARBOXYLIC(W)ACID)
L8            20 METAL ALKYL AND CARBOXYLIC ACID

=> d1-20 bib abs
D1-20 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> d 1-20 bib abs

L8   ANSWER 1 OF 20  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2004:955757  CAPLUS
DN   142:241258
TI   Polyamide resin composition
IN   Jung, Yong Gyun; Lee, Do Geun; Park, Eun Ha
PA   Kolon Ind. Inc., S. Korea
SO   Repub. Korean Kongkae Taeho Kongbo, No pp. given
     CODEN: KRXXA7
DT   Patent
LA   Korean
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
PI   KR 2003053835        A     20030702    KR 2001-83850          20011224
PRAI KR 2001-83850               20011224
AB   A polyamide resin composition is provided, which shows excellent mech. strength
     and surface characteristics and exhibits an excellent coating property by
     only base coating without a primer treatment.  The polyamide resin composition
     comprises 60-89.5% a polyamide; 5-15% a thermoplastic rubber; 5-20% a
     copolymer of an aromatic vinyl compound and Ph maleimide; and 0.5-5% an alkali
     metal alkyl sulfate.  Preferably the polyamide is
     polyamide 66 or polyamide 6; the thermoplastic elastomer is an
     ethylene-propylene-diene copolymer grafted with 0.4-2%
     α,β-unsatd.  carboxylic acid, anhydride or
     their derivs.; the copolymer of an aromatic vinyl compound and Ph maleimide is
     poly(Ph maleimide styrene) with number average mol. weight 80000-200000, which is
     grafted with 40-60 parts Ph maleimide, 40-60 parts styrene, and 1-5 parts
     maleic anhydride; and the alkali metal alkyl sulfate
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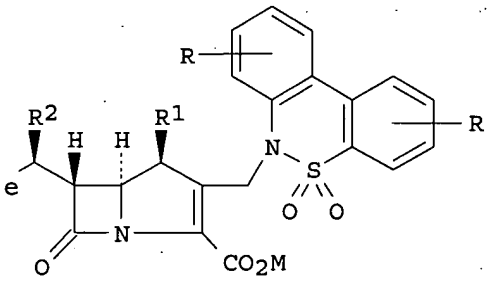
compound is a sodium C5-C25 alkyl sulfate.

L8 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:819244 CAPLUS
DN 132:49829
TI Preparation and formulation of naphthalenesulfamylmethyl-carbapenems for use as antibacterial agents
IN Ratcliffe, Ronald W.; Wilkening, Robert R.; Blizzard, Timothy A.
PA Merck & Co., Inc., USA
SO PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9966928	A1	19991229	WO 1999-US14223	19990623
	W: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2335507	AA	19991229	CA 1999-2335507	19990623
	AU 9947110	A1	20000110	AU 1999-47110	19990623
	EP 1089730	A1	20010411	EP 1999-930606	19990623
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI, RO				
	US 6294528	B1	20010925	US 1999-338644	19990623
	JP 2002518447	T2	20020625	JP 2000-555614	19990623
PRAI	US 1998-90684P	P	19980625		
	WO 1999-US14223	W	19990623		

OS MARPAT 132:49829
GI



I

AB Naphthalenesulfamylmethyl-carbapenems I [R = H, aryl, heterocyclyl, alkenyl, etc.; R1 = H, Me; R2 = H, OH, F, protected hydroxy; M = H, alkali **metal**, **alkyl**, alkenyl, etc.;] were prepared for use as antibacterial agents. Thus, I [R = H, R1 = Me, R2 = OH, M = Na] was prepared starting from (4S,5R,6S)-3-(hydroxymethyl)-4-methyl-7-oxo-6-[(1R)-1-[[(2-propenyloxy)carbonyl]oxy]ethyl]-1-azabicyclo[3.2.0]hept-2-ene-2-**carboxylic acid** 2-propenyl ester and 6H-dibenzo[c,e][1,2]thiazine, 5,5-dioxide. Pharmaceutical formulations of the prepared carbapenems were also presented.
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:761984 CAPLUS
DN 123:287187
TI Preparation of fluorenyl-containing metallocenes and their use in polymerization of olefins
IN Alt, Helmut G.; Palackal, Syriac J.; Patsidis, Konstantinos; Welch, M. Bruce; Geerts, Rolf L.; Hsieh, Eric T.; McDaniel, Max P.; Hawley, Gil R.;

Smith, Paul D.
PA Phillips Petroleum Co., USA
SO U.S., 14 pp. Cont.-in-part of U.S. 5,191,132.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 21

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5436305	A	19950725	US 1991-734853	19910723
	US 5191132	A	19930302	US 1991-697363	19910509
	CA 2061559	AA	19921110	CA 1992-2061559	19920220
	CA 2061559	C	19980106		
	CN 1066440	A	19921125	CN 1992-101762	19920314
	CN 1030068	B	19951018		
	CN 1068829	A	19930210	CN 1992-102617	19920409
	CA 2067525	AA	19921110	CA 1992-2067525	19920429
	CA 2067525	C	19980915		
	NO 9201805	A	19921110	NO 1992-1805	19920507
	JP 05148166	A2	19930615	JP 1992-116375	19920508
	AT 158269	E	19971015	AT 1992-107781	19920508
	ES 2106795	T3	19971116	ES 1992-107781	19920508
	KR 178279	B1	19990515	KR 1992-7931	19920508
	AU 9217002	A1	19930311	AU 1992-17002	19920520
	AU 649821	B2	19940602		
	ZA 9203987	A	19930224	ZA 1992-3987	19920601
	KR 192683	B1	19990615	KR 1992-10768	19920620
	BR 9102355	A	19930511	BR 1992-2355	19920622
	JP 05239082	A2	19930917	JP 1992-163092	19920622
	JP 2791247	B2	19980827		
	NO 9202910	A	19930125	NO 1992-2910	19920722
	NO 304553	B1	19990111		
	RO 111683	B1	19961230	RO 1992-1007	19920722
	FI 113544	B1	20040514	FI 1992-3337	19920722
	EP 524624	A2	19930127	EP 1992-112582	19920723
	EP 524624	A3	19930505		
	EP 524624	B1	20020515		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE				
	HU 63972	A2	19931129	HU 1992-2412	19920723
	HU 212903	B	19961230		
	AT 217637	E	20020615	AT 1992-112582	19920723
	ES 2176180	T3	20021201	ES 1992-112582	19920723
	US 5401817	A	19950328	US 1993-64630	19930520
	US 5631335	A	19970520	US 1993-73023	19930607
	US 5466766	A	19951114	US 1993-154224	19931117
	US 5571880	A	19961105	US 1994-192223	19940203
	US 5451649	A	19950919	US 1994-214934	19940317
	US 5594078	A	19970114	US 1994-305243	19940913
	US 5459218	A	19951017	US 1994-352478	19941209
	US 5627118	A	19970506	US 1994-352933	19941209
	US 6420579	B1	20020716	US 1994-352936	19941209
	US 5565592	A	19961015	US 1995-402244	19950310
	US 5627247	A	19970506	US 1995-408468	19950322
	US 5610247	A	19970311	US 1995-410154	19950323
	US 5637744	A	19970610	US 1995-457566	19950601
	US 5534473	A	19960709	US 1995-463839	19950605
	US 5616752	A	19970401	US 1995-462328	19950605
	US 5668230	A	19970916	US 1996-678281	19960711
	JP 10226695	A2	19980825	JP 1998-37503	19980219
	JP 3111176	B2	20001120		
	US 6162936	A	20001219	US 1998-85945	19980528
	US 6403734	B1	20020611	US 1998-197761	19981123
PRAI	US 1991-697363	A2	19910509		
	US 1991-734853	A	19910723		
	JP 1992-163092	A3	19920622		
	US 1992-984054	A2	19921130		
	US 1993-3221	A2	19930111		
	US 1993-64630	A2	19930520		
	US 1993-71906	B2	19930603		

US 1993-73023 A3 19930607
US 1993-75712 A2 19930611
US 1993-75931 A2 19930611
US 1993-154224 A3 19931117
US 1994-192223 A2 19940203
US 1994-194944 B2 19940211
US 1994-226600 B2 19940412
US 1994-305243 A3 19940913
US 1994-352936 A2 19941209
US 1995-402244 A3 19950310
US 1998-85945 A1 19980528

OS MARPAT 123:287187

AB A fluorenyl precursor is treated with an alkali **metal alkyl** in a hydrocarbon or noncyclic ether diluent and the resulting fluorenyl salt is treated with a Group IVB, VB, or VIB metal compound to give a metallocene. Thus, fluorene was treated successively with BuLi and BrCH2CH2Br to give 1,2-di-9-fluorenylethane, which was treated with MeLi in toluene or Et2O and then with ZrCl4 to give a bridged zirconocene. This metallocene was used with methylaluminoxane to polymerize ethylene at 90° to give a polyethylene with weight-average mol. weight 633 + 103 and d. 0.9384.

L8 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:699539 CAPLUS

DN 123:255879

TI Mechanistic aspects of Ru(BINAP)-catalyzed asymmetric hydrogenation of vinyl **carboxylic acid** derivatives

AU Chan, Albert S. C.; Chen, Chih Chiang; Yang, Teng Kuei; Huang, Jen Hwei; Lin, Ying Chih

CS Department of Applied Biology and Chemical Technology, Hong Kong Polytechnic University, Hong Kong, Hong Kong

SO Inorganica Chimica Acta (1995), 234(1-2), 95-100
CODEN: ICHAA3; ISSN: 0020-1693

PB Elsevier

DT Journal

LA English

OS CASREACT 123:255879

AB The mechanism of the RuII(BINAP)-catalyzed hydrogenation of vinyl carboxylic acids has been investigated via detailed deuterium labeling studies. The activation of H2 by the Ru catalyst was found to be via a heterolytic splitting route. The regioselectivity of the hydride migration step strongly correlates to the stability of the resulting **metal-alkyl** intermediate. When an α,β-unsatd. **carboxylic acid** such as 2-(6-methoxy-2-naphthyl)acrylic acid is used as the substrate, the hydride migrates exclusively to the α position, forming a metal-primary alkyl intermediate. In the case of a β,γ-unsatd. **carboxylic acid** with an electron-withdrawing group attached to the β-carbon, the hydride migrates exclusively to the γ-carbon, forming a five-membered ring **metal-alkyl** intermediate with the β-carbon coordinated to the metal. The product formation step involves two competing routes: the hydrogenolysis and the solvolysis of the **metal-alkyl** intermediates. The choice of each route is highly dependent on the reaction conditions. The solvolysis route is significant if the reaction is carried out under low H2 pressure and the reaction medium is more acidic. Under high H2 pressure, hydrogenolysis becomes the dominant route. Under basic conditions, the solvolysis route is essentially shut off and only the hydrogenolysis product is obtained. A unified mechanism which explains all of the known exptl. results is proposed.

L8 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1993:101677 CAPLUS

DN 118:101677

TI Preparation of fluorene derivatives

IN Patsidis, Konstantinos; Palackal, Syriac Joseph; Alt, Helmut

PA Phillips Petroleum Co., USA

SO Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW

DT Patent
LA English
FAN.CNT 21

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 512554	A2	19921111	EP 1992-107781	19920508
	EP 512554	A3	19940601		
	EP 512554	B1	19970917		
	R: AT, BE, DE, ES, FR, GB, IT				
	US 5191132	A	19930302	US 1991-697363	19910509
	CA 2061559	AA	19921110	CA 1992-2061559	19920220
	CA 2061559	C	19980106		
	CN 1066440	A	19921125	CN 1992-101762	19920314
	CN 1030068	B	19951018		
	NO 9201805	A	19921110	NO 1992-1805	19920507
	JP 05148166	A2	19930615	JP 1992-116375	19920508
	AT 158269	E	19971015	AT 1992-107781	19920508
	ES 2106795	T3	19971116	ES 1992-107781	19920508
	KR 178279	B1	19990515	KR 1992-7931	19920508
PRAI	US 1991-697363	A	19910509		

OS MARPAT 118:101677
AB Title compds. ZRZ (at least 1 Z = organic radical containing cyclopentadienyl functionality and the other Z = cyclopentadienyl-containing organic radical, Cl, Br, iodo) were prepared by reaction of the precursor to Z with an alkali **metal alkyl** to produce the Z anion and reaction of the latter with XRX (each X = Br, Cl, iodo; R = C1-20 alkylene which may contain Ge, B, Si, P, N, Al, O or R = Ge, Si, B, Al, P, Sn). Thus, BuLi was added to a solution of fluorene in THF and the mixture was stirred 1 h, then added over 2 h to a stirred solution of 1,2-dibromoethane in pentane. Work up gave 1-bromo-2-(fluorenyl)ethane.

L8 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:559451 CAPLUS
DN 115:159451
TI Process for preparing transition metal cyclopentadienyl carbonyl compounds
IN Bell, Donald R.; Berris, Bruce C.
PA Ethyl Corp., USA
SO U.S., 4 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5026885	A	19910625	US 1990-488886	19900306
	CA 2036861	AA	19910907	CA 1991-2036861	19910220
	CA 2036861	C	20001024		
	JP 04211693	A2	19920803	JP 1991-60975	19910304
	EP 446007	A1	19910911	EP 1991-301793	19910305
	EP 446007	B1	19940907		
	R: BE, DE, ES, FR, GB, IT				
	AU 9172073	A1	19910912	AU 1991-72073	19910305
	AU 634865	B2	19930304		
PRAI	US 1990-488886	A	19900306		

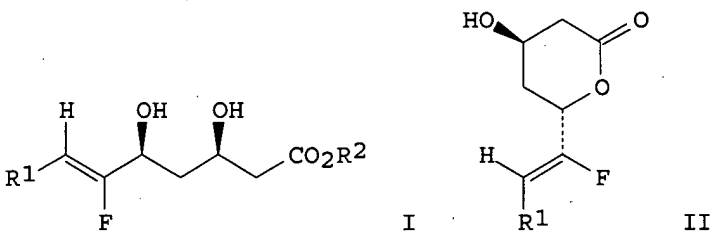
OS MARPAT 115:159451
AB Title compds. [RxCpM(CO)y]n (R = hydrocarbyl; Cp = C5H5 = η5-cyclopentadienyl; M = transition metal, e.g., Mn, Co, Mo, Ru, Rh; x = 0-5; y = 1-7; n = 1,2; any 2 R groups together can form a fused ring with Cp) are prepared in one step by reaction of the corresponding transition metal salt of an organic **carboxylic acid**, a β-diketone, or a β-keto ester with 1-12 mol of a cyclopentadienyl compound and 0.3-10 mol of a **metal alkyl** reducing agent (preferably Et3Al) under CO pressure at 75-225°. E.g., Mn(OAc)2 10g, methylcyclopentadiene 13.9 g, and Et3Al 19.9 g in 50 mL PhMe and 12.9 g Et2O reacted under 800 psig CO at 175° 2 h to give 85% (C5H4Me)Mn(CO)3.

L8 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:23976 CAPLUS

DN 114:23976
TI Preparation of antihypercholesterinemic and antiarteriosclerotic 6-fluoro-3,5-dihydroxy carboxylic acids.
IN Beck, Gerhard; Bartmann, Wilhelm; Wess, Guenther; Granzer, Ernold
PA Hoechst A.-G., Germany
SO Ger. Offen., 46 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

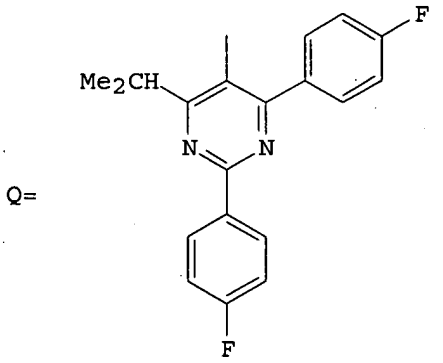
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3826814	A1	19900208	DE 1988-3826814	19880806
	EP 354418	A2	19900214	EP 1989-113917	19890728
	EP 354418	A3	19910731		
	EP 354418	B1	19940518		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	AT 105838	E	19940615	AT 1989-113917	19890728
	ES 2054947	T3	19940816	ES 1989-113917	19890728
	FI 8903677	A	19900207	FI 1989-3677	19890803
	FI 90546	B	19931115		
	FI 90546	C	19940225		
	DK 8903844	A	19900207	DK 1989-3844	19890804
	NO 8903167	A	19900207	NO 1989-3167	19890804
	NO 175637	B	19940801		
	NO 175637	C	19941109		
	AU 8939297	A1	19900208	AU 1989-39297	19890804
	AU 616291	B2	19911024		
	JP 02091034	A2	19900330	JP 1989-201500	19890804
	ZA 8905959	A	19900425	ZA 1989-5959	19890804
	US 5204351	A	19930420	US 1989-389809	19890804
PRAI	DE 1988-3826814	A	19880806		
	EP 1989-113917	A	19890728		

OS CASREACT 114:23976; MARPAT 114:23976
GI



I

II



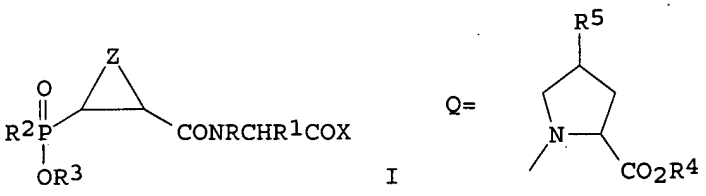
AB Title acid derivs. I [R1 = various (substituted) Ph, 3-pyridinyl, 5-pyrimidinyl, 4-pyridazinyl, 2- or 3-pyrrolyl, 2- or 3-thienyl, 3-furyl (5-membered rings may be benzo-fused), trisubstituted vinyl; R2 = H, alkyl, alkenyl, (halo- or alkyl)benzyl, alkali **metal**, (**alkyl**- or hydroxyalkyl)ammonium] and the corresponding lactones II

were prepared For example, 5-hydroxymethyl-2,4-bis-(4-fluorophenyl)-6-(1-methylethyl)pyrimidine was subjected to a sequence of oxidation to the aldehyde, condensation with Ph2P(O)CHFCO2Et, reduction with Dibal, and reoxidn. to give (2Z)-2-fluoro-3-[246-bis-(4-fluorophenyl)-6-(1-methylethyl)pyrimidin-5-yl]prop-2-enal. This was condensed with the dianion of (S)-AcOCHPhCPh2OH, followed by transesterification with NaOMe, condensation with the anion of AcOCMe3, and reduction with Et3B-NaBH4 to give I (R1 = Q, R2 = CMe3) (III). The IC50 values of III for inhibiting HMG-CoA reductase in vitro and cholesterol biosynthesis in cell culture were 2.9 + 10-9 and 1.9 + 10-8, resp. Prepns. of 13 I, 12 II, and numerous intermediates are described, with test data for 5 compds.

L8 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1989:574668 CAPLUS
DN 111:174668
TI Phosphinylcycloalkylcarbonyl- and phosphinylcycloalkenylcarbonyldipeptide as angiotensin converting enzyme inhibitors
IN Weller, Harold Norris, III; Gordon, Eric Michael
PA E. R. Squibb and Sons, Inc., USA
SO Ger. Offen., 16 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3831936	A1	19890406	DE 1988-3831936	19880920
	US 4849525	A	19890718	US 1987-98651	19870921
	CA 1316630	A1	19930420	CA 1988-575028	19880817
	GB 2210043	A1	19890601	GB 1988-21942	19880919
	GB 2210043	B2	19910508		
	FR 2620711	A1	19890324	FR 1988-12268	19880920
	FR 2620711	B1	19950331		
	JP 01113400	A2	19890502	JP 1988-237454	19880921
PRAI	US 1987-98651	A	19870921		

OS MARPAT 111:174668
GI



AB The title compds. [I; R = H, alkyl, cycloalkyl, aralkyl, aminoalkyl, hydroxyalkyl, mercaptoalkyl; R1 = H, alkyl, haloalkyl, indolylalkyl, phenylalkyl, imidazolylalkyl, carbamoylalkyl, etc.; R2 = alkyl, aralkyl, aminoalkyl; R3,R4 = H, alkali **metal**, **alkyl**, (substituted) alkylcarbonyloxyalkyl, phenylcarboyloxyalkyl; X = Q; Z = atoms to complete a (substituted) C3-10 cycloalkyl, C3-7 cycloalkenyl, C5-7 heterocyclyl ring; R5 = H, cyclohexyl, C1-4 alkoxy, (substituted) Ph, phenylalkyl, phenylalkoxy, phenylalkylthio], useful as angiotensin converting enzyme (ACE) inhibitors (no data) were prepared trans-6-[Hydroxy(4-phenylbutyl)phosphinyl]-3-cyclohexene-1-**carboxylic acid** [preparation from Et (4-phenylbutyl)phosphinate given] in THF at 125° was stirred 1 h with DCC and H-Ala-Pro-OBzl (Bzl = PhCH2). TsOH and Et3N were added. After adding TsOH and Et3N, the mixture was stirred for 18 h to give the coupling product as a separable mixture of isomers. Isomer A was hydrogenolyzed in MeOH over 20% Pd(OH)2/carbon followed by stirring with aqueous LiOH to give N-[trans-6-[hydroxy(4-phenylbutyl)phosphinyl]-3-cyclohexene-1-carbonyl]-L-alanyl-L-proline dilithium salt.

L8 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1989:425842 CAPLUS
DN 111:25842
TI Novel collectors and processes for making and using same
IN Wang, Samuel Shan Ning; Nagaraj, D. R.
PA American Cyanamid Co., USA
SO Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 311759	A2	19890419	EP 1988-112212	19880728
	EP 311759	A3	19890823		
	EP 311759	B1	19920902		
	R: DE, FR, GB, IT, NL				
	US 4871466	A	19891003	US 1987-108611	19871015
	BR 8805264	A	19900605	BR 1988-5264	19881013
	CA 1299197	A1	19920421	CA 1988-579990	19881013
	AU 8823793	A1	19890420	AU 1988-23793	19881014
	AU 604373	B2	19901213		
	US 4929343	A	19900529	US 1989-375443	19890705
	US 5237079	A	19930817	US 1990-478307	19900212
PRAI	US 1987-108611	A	19871015		
	US 1989-375443	A3	19890705		

AB Alkali metal hydroxamates are produced by reacting the Me or Et ester of a fatty acid having 6-22 C atoms with hydroxylamine salt and an alkali metal hydroxide in the presence of a water-C8-22 alc. mixture and, preferably, a non-ionic or cationic surfactant. The solution of hydroxamate thus produced can be used in the froth flotation of non-sulfide minerals such as kaolin. The process eliminates the need for hazardous and expensive recovery steps such as filtration and results in high conversions, i.e., 85-95%.

L8 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1989:38631 CAPLUS
DN 110:38631
TI Preparation and use of acylaminopropionates as surfactants, emulsifiers, wetteners, detergent components, and in production of waterproof leather
IN Dahmen, Kurt; Mertens, Richard; Stockhausen, Dolf
PA Chemische Fabrik Stockhausen G.m.b.H., Fed. Rep. Ger.
SO Ger. Offen., 9 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3717961	A1	19880505	DE 1987-3717961	19870527
	DE 3717961	C2	19940526		
	EP 265818	A2	19880504	EP 1987-115365	19871021
	EP 265818	A3	19900425		
	EP 265818	B1	19940928		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE				
	JP 63112544	A2	19880517	JP 1987-266178	19871021
	JP 2577011	B2	19970129		
	ES 2003836	T3	19941216	ES 1987-115365	19871021
	AU 8780101	A1	19880428	AU 1987-80101	19871023
	AU 602171	B2	19901004		
	BR 8705693	A	19880531	BR 1987-5693	19871023
	SU 1833368	A3	19930807	SU 1989-4613176	19890104
	RU 2062302	C1	19960620	RU 1989-4613251	19890104
	LV 11044	B	19961020	LV 1993-715	19930628
	LT 3617	B	19951227	LT 1993-1535	19931206
	LT 3805	B	19960325	LT 1993-1597	19931215
PRAI	DE 1986-3636497	A1	19861027		
	DE 1987-3717961	A	19870527		

OS MARPAT 110:38631

AB R1(R2A)NCH2CHR3CO2X [R1 = C1-22 (unsatd.) alkyl, alkoxyalkyl; R2 = C1-18 alkyl, C3-4 carboxyalkyl, carboxyphenyl, carboxy; R3 = H, Me; X = H, alkali metal, alkaline earth **metal**, (**alkyl**)ammonium alkanolammonium; A = CO, SO2, CONH, C0-3 alkylene] useful as emulsifiers, wetteners, surfactants, and in preparation of waterproofing agents for leather, were prepared by reaction of R1NH2 with (meth)acrylic acid followed by acylation with **carboxylic acid** anhydrides, carbonyl chlorides, isocyanates, etc. Thus, CH2:CHCO2H was added to oleylamine at 60° and after 2.5 h and 90° maleic anhydride was added and the mixture was stirred for a further 2 h at 70-80° to give N-oleyl-N-(2-carboxyethyl)maleamic acid. The latter was used to prepare waterproof leather.

L8 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1987:554254 CAPLUS
DN 107:154254
TI Preparation and formulation of quinolonecarboxylic acid derivatives as antibacterials
IN Enomoto, Hiroshi; Kise, Masahiro; Ozaki, Masakuni; Kitano, Masahiko; Morita, Iwao
PA Nippon Shinyaku Co., Ltd., Japan
SO U.S., 30 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4659734	A	19870421	US 1983-523329	19830815
	CA 1259988	A1	19890926	CA 1983-434945	19830819
PRAI	US 1983-523329		19830815		

OS MARPAT 107:154254
GI For diagram(s), see printed CA Issue.
AB The title compds. I [R1 = H, alkali metal, alkaline earth **metal**, **alkyl**, pivaloyloxymethyl, phthalidyl; R2 - R5 = H, halo, alkoxy, disubstituted amino (including rings); A = (un)saturated hydrocarbyl; alkoxy, alkylthio, HO, halo; (un)substituted alkyl, O2N, NC, (un)substituted Ph, etc.) and their salts, were prepared Et 7-chloro-6-fluoro-4-hydroxy-2-mercaptoquinoline-3-carboxylate in DMF was refluxed with K2CO3 and BrCH2CH(OEt)2 and H2SO4 to give the Et thiazoloquinolinecarboxylate which was saponified to the free acid and substituted with N-methylpiperazine to give 7-fluoro-8-(4-methyl-1-piperazinyl)-5-oxo-5H-thiazolo[3,2-a]quinoline-4-**carboxylic acid** (II). II had an ED50 of 16 mg/kg against Pseudomonas aeruginosa in mice.

L8 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1987:176623 CAPLUS
DN 106:176623
TI Cyclopentadienylruthenium and -osmium complexes. IV. Separation and identification of ruthenocenecarboxylic and -boronic acids. Use and evaluation of the chromatographic test for the detection of complexing of alkali metal cations
AU Wilczewski, Tadeusz
CS Inst. Inorg. Chem. Technol., Tech. Univ. Gdansk, Gdansk, 80-952, Pol.
SO Journal of Organometallic Chemistry (1986), 306(1), 125-32
CODEN: JORCAI; ISSN: 0022-328X
DT Journal
LA English
OS CASREACT 106:176623
AB Ruthenocene mono- and dicarboxylic acids were separated and identified. The applicability range of the chromatog. test, previously used to detect the complexing phenomenon of alkali metal cations by crown ethers, was determined The performance of the test in the case of several new cyclopentadienyl Ru and Os complexes, organic acids, and compds. of the ionic-pair type containing a large BPh4- anion, was investigated.

L8 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1984:209399 CAPLUS
DN 100:209399

TI 2',4'-Difluoro-4-hydroxy-(1,1'-diphenyl)-3-**carboxylic acid**
IN Meneghin, Mariano; Piccinelli, Piero; Giordano, Claudio
PA Zambon S.p.A., Italy
SO Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 101625	A1	19840229	EP 1983-201056	19830716
EP 101625	B1	19860102		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
AT 17230	E	19860115	AT 1983-201056	19830716
JP 59033242	A2	19840223	JP 1983-135051	19830722
JP 05034347	B4	19930521		
US 4486599	A	19841204	US 1983-516356	19830722
PRAI IT 1982-22516	A	19820722		
EP 1983-201056	A	19830716		

AB The title acid, Diflunisal, was prepared from 4-(2,4-F2C6H3)C6H4OH (I) and alkali **metal alkyl** carbonates; Diflunisal is useful as an antiinflammatory agent (no data). I was added to MeOC(O)ONa in MeOH, the MeOH was distilled, and the residue was heated under N at 200° to give Diflunisal.

L8 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1979:456370 CAPLUS
DN 91:56370
TI 1-Hydroperfluoroalken-(1)-yl **carboxylic acid** derivatives and their enol ethers and enol thioethers
IN Bathelt, Heinrich
PA Hoechst A.-G., Fed. Rep. Ger.
SO Ger. Offen., 20 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 2742685	A1	19790405	DE 1977-2742685	19770922
PRAI DE 1977-2742685	A	19770922		

AB RC(ZR1):CHCO2R3 [R = C1-11 perfluoroalkyl; R1 = alkyl, F3C(CF2)a(CH2)b (a is an integer of 0-16, b is an integer of 1-4), Ph, (CH2CH2O)nR2, (CH2CHMeO)nR2, (CHMeCH2O)nR2 (n = 1-50; R2 = H, alkyl); R3 = H, NH4+, alkali **metal**, **alkyl**; Z = O, S] and RCF:CHCO2R3 (R and R3 the same as above) were prepared Thus, dropping a 30% NaOMe solution into C8F17CH2CO2Me in MeOH over 20 min with ice cooling and stirring the mixture 1 h at room temperature gave 94.2% C7F15C(OMe):CHCO2Me. Et3N was added to boiling C8F17CH2CO2Me in CCl2FCF2Cl over 10 min and the mixture was refluxed 10 h to give 95% C7F15CF:CHCO2Me which was mixed with EtSH in CCl4. Treating this solution with Et3N at room temperature and refluxing the mixture 8 h gave 91% C7F15C(SEt):CHCO2Me.

L8 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1969:502264 CAPLUS
DN 71:102264
TI Chemical behavior of trialkylaluminum and dialkylzinc in the copolymerization of α-amino acid NCA[N- **carboxylic acid** anhydride] with epoxides
AU Tsuruta, Teiji; Inoue, Shohei; Matsuura, Kazuo
CS Univ. Tokyo, Tokyo, Japan
SO Journal of Polymer Science, Polymer Symposia (1967), 22(Pt. 2), 981-92
CODEN: JPYCAQ; ISSN: 0360-8905
DT Journal
LA English
AB α-Amino acid-N- **carboxylic acid** anhydrides such as L(+)-alanine-NCA and L(-)-β-phenylalanine-NCA were copolymd. with propylene oxide by means of trialkylaluminum or dialkylzinc as catalyst.

Structure of the copolymers formed were studied with the aid of ir and O.R.D. anal. Trialkylaluminum caused the formation of copolymers having more randomly distributed monomeric units of the amino acid. On the basis of results of the reaction modes of the two metal alkyls with the NCA group, the difference between the chemical behaviors of the metal alkyls in the copolymn. is discussed.

L8 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1965:59047 CAPLUS
DN 62:59047
OREF 62:10459f-h
TI Organoboron mono and dicarboxylic acids and their preparation
IN Ager, John W., Jr.; Alexander, Roy P.; Heying, Theodore L.
PA Olin Mathieson Chemical Corp.
SO 6 pp.
DT Patent
LA Unavailable
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3167584		19650126	US 1959-809569	19590428
PRAI US		19590428		

AB The title compds. were prepared by treating RR1B10H8(CR2CR3) successively with an alkali **metal alkyl** or aryl, CO2, and an aqueous solution of a mineral acid. Thus, to a solution of BuLi (from 0.054 mole BuBr, 2 hrs., at -10°) in 30 ml. Et2O was added a solution of 0.021 mole B10H10(CHCH) in 20 ml. Et2O at 0°, the mixture brought to room temperature (precipitate formed), treated with CO2 (600 psi., 36 hrs.), extracted with 100 ml. H2O, and the aqueous solution acidified (HCl). The oil was extracted with Et2O and worked up to give a white pasty solid. Recrystn. from C6H6-heptane gave 1.5 g. B10H10[C(CO2H)]2 m. 232°. Similarly prepared was B10H10[CH(CO2H)]2, m. 154-6°. The compds. were useful as fuels.

L8 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1955:60797 CAPLUS
DN 49:60797
OREF 49:11717d-i,11718a-i
TI Hydroxyhexahydrophenanthrenecarboxylic acids and derivatives
IN Hogg, John A.
PA Upjohn Co.
DT Patent
LA Unavailable
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2687426		19540824	US 1947-756327	19470621

GI For diagram(s), see printed CA Issue.
AB I, where A is OH or a group convertible to OH by hydrolysis, B is CO2H or an esterified carboxyl group, and R is a lower alkyl, may be prepared by treating meta-substituted phenethyl halides with a Hagemann-type ester, reducing, cyclizing, and introducing the R group in the 2-position by treating with a **metal alkyl**. For example, 13 g. (0.563 mole) of Na was added portionwise to 250 ml. liquid NH3 containing 0.2 g. hydrated Fe(NO3)3, cooling when necessary to speed addition The mixture was stirred until the blue color turned gray, the suspension was cooled in an alc.-Dry Ice bath, and 102.5 g. (0.563 mole) of Hagemann's. ester, 1-methyl-6-carbethoxy-1-cyclohexen-3-one was added, with cooling. The deep red mixture was stirred for 20 min. and cooled again while 300 ml. dry toluene and 50 ml. Na-dried ether were added. The mixture was stirred 2 hrs. at room temperature until the NH3 had escaped and then heated to boiling, whereupon the yellow Na derivative precipitated m-Methoxyphenethyl bromide 120 g. (0.563 mole) was added and the suspension refluxed under N for 18 hrs. The mixture was washed with dilute HCl and H2O, the toluene layer was dried over MgSO4, and the toluene removed under vacuum. Distillation yielded 102 g. 1-methyl-2-(m-methoxyphenethyl)-6-carbethoxy-1-cyclohexen-3-one (II), b. 180-4°/0.3 mm. II 33 g. (0.104 mole) dissolved in 100 ml. of 95% EtOH, was hydrogenated in 45 min. under 35 lb. pressure, using 4 gm. palladized C as catalyst. A H2O-white oil of fruity odor was obtained after filtration and removal of solvent. This oil was cooled to

-20°, 80 ml. of cooled concentrated H_2SO_4 were added, the mixture was stirred, and the temperature allowed to rise to below 10°. After 20 min. of stirring, the temperature was allowed to rise to 20°, whereupon the mixture was poured on excess ice. The total reaction time was 30 min. A light colored gum, 1-methyl-2-carbethoxy-7-methoxy-1,2,3,4,9,10-hexahydrophenanthrene, separated and was extracted with ether. The ether was removed and the residue hydrolyzed by refluxing for 1 hr. in 200 ml. of 6% KOH in 180 ml. of 95% EtOH and 20 ml. H_2O. The alc. was vacuum distilled, the residue diluted with H_2O, washed with ether, and acidified with concentrated HCl to precipitate the free acid as an oil which solidified; 2 recrystns. from 95% EtOH gave 14.2 g. 1-methyl-2-carboxy-7-methoxy-1,2,3,4,9,10-hexahydrophenanthrene (III), m. 192-3°. When the preceding procedure for preparing III from II was followed, omitting the hydrogenating step, 1-methyl-2-carboxy-7-methoxy-3,4,9,10-tetrahydrophenanthrene (IV), m. 192-5°, was obtained. The Me ester of IV, m. 112-13°C., was obtained by treating the acid with ethereal CH_2N_2. Demethylation of II with HBr gave an oil, 1-methyl-2-carboxy-7-hydroxy-1,2,3,4,9,10-hexahydrophenanthrene (V). III 7.5 g. was dissolved in ether, treated with excess ethereal CH_2N_2, the solvent removed, and the residue recrystd. from 95% EtOH to yield 7.3 g. Me 1-methyl-7-methoxy-1,2,3,4,9,10-hexahydrophenanthrene-2-carboxylate (VI), m. 107-8°. Ph_3CNa 0.0255 mole was added to an ether solution of 0.0255 mole VI in 300 ml. of Na-dried ether, all under N. The wine-colored solution was allowed to stand at room temperature with occasional shaking for 1 hr., the color fading to light orange. Addition of 25 ml. MeI resulted in a reflux of the ether and precipitation of NaI. After standing overnight, the ether was removed and the product, 1,2-dimethyl-2-carbomethoxy-7-methoxy-1,2,3,4,9,10-hexahydrophenanthrene, was refluxed for 8 hrs. with 10 g. KOH in 10 ml. H_2O and 200 ml. 95% EtOH. The alc. was removed in vacuo the residue diluted with H_2O to precipitate the K salt; the mixture of the salt and Ph_3CH was filtered off and the latter washed out with ether, leaving 7 g. white crystalline 1,2-dimethyl-2-carboxy-7-methoxy-1,2,3,4,9,10-hexahydrophenanthrene (VII). The 1,2-diethyl- and the 1-methyl-2-ethyl-2-carboxy-7-benzyloxy derivs. of VII were similarly prepared from the corresponding derivs. of VI. Solution of the salt of VII in 250 ml. hot aqueous alc., acidification with HCl and recrystn. from 95% EtOH gave 5.8 g. bundles of needles of the dl-trans form of the acid, m. 206-7°. HCl acidification of the aqueous alkaline filtrate from the preparation of VII gave a tacky solid which was dissolved in 95% EtOH and allowed to stand for 2 days to give the dl-cis form of the acid, m. 172-3° on crystallization from EtOH. 1-Oxo-2-methyl-2-carbomethoxy-7-methoxy-1,2,3,4,9,10-hexahydrophenanthrene (VIII) may be prepared by condensing m-methoxyphenethyl halide and a suitably substituted β-oxopimelate, cyclodehydrating the resulting ketone, hydrolyzing the resultant dihydronaphthalene derivative, re-esterifying with an alc. and cyclizing with a Na alcoholate to the Na salt of the unsatd. keto ester to give the 1-oxo-2-carbalkoxy-7-methoxyhexahydrophenanthrene. Treatment with Me halide introduces the 2-methyl group to give VIII. Treatment of 12.5 g. VIII in 200 ml. dry ether with 0.05 mole of EtMgBr in 50 ml. dry C_6H_6 at room temperature for 3-4 min. gave the Me 1-hydroxy-1-ethyl-2-methyl- 7 - methoxy - 1,2,3,4,9,10 - hexahydrophenanthrene - 2-carboxylate, which was hydrolyzed with an excess of 1:1 concentrated HCl:H_2O. The solvents were removed, the residue solidified, and triturated with MeOH. Filtration and crystallization from MeOH gave 8 g. of Me 1-ethylidene-2-methyl-7-methoxy-1,2,3,4,9,10-hexahydrophenanthrene-2-carboxylate (IX), m. 145-7°. Similar treatment of VIII with iso-PrMgBr gave the 1-isopropylidene derivative of IX. VIII 8 g. in 200 ml. MeOH was reduced in an Adams hydrogenator under 40 lb. pressure using 2 g. palladized C catalyst. After absorption of I equivalent of H, the catalyst was removed and the product refluxed for 20 hrs. with a MeOH solution of 12 g. KOH dissolved in a min. of H_2O. The solvent was removed, the product washed with cold water and filtered, and dissolved in hot aqueous alc. Acidification gave an oil which solidified while hot and melted 140-55°. Crystallization from EtOH gave crystals, m. 165-8°, and recrystn. gave 0.7 g. needles of 1-ethyl-2-methyl-2-carboxy-7-methoxy-1,2,3,4,9,10-hexahydrophenanthrene (X), m. 175-6°. Hydrogenation of 200 mg. X at atmospheric pressure in 20 ml. MeOH with 150 mg. palladized C catalyst until the theoretical amount of H was absorbed, gave a white tacky gum after filtration and removal of solvent. Trituration with 20 ml. of a 10% aqueous NaOH and filtration gave a filtrate A and an insol. salt, which was dissolved in hot aqueous alc. and acidified to

give 90 mg. 1-ethyl-2-methyl-2-carboxy-7-methoxy-1,2,3,4,9,10,11,12-octahydrophenanthrene (XI), m. 183-5°. Recrystn. from alc. gave chunky prisms, m. 188-90°. Acidification of filtrate A gave 100 mg. of acid, m. 60-65°. Trituration with 50% MeOH-H2O freed the residue of higher melting material, and on standing overnight at ice temperature deposited silky needles, a racemic-modification of XI, m. 112-15°, recrystd., m. 113-15°. These compds. are active estrogens in themselves as well as intermediates in the preparation of other estrogenic materials.

L8 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1948:13793 CAPLUS
DN 42:13793
OREF 42:2995b-f
TI Arylguanamines
IN Fairweather, Harold G. C.
PA American Cyanamid Co.
DT Patent
LA Unavailable
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 593019		19471007	GB	

AB Guanamines substituted in the 2-position with an aryl **carboxylic acid** or sulfonated derivative thereof or an arylguanamine and with or without an alkenyl, aryl, or dialkyl substituent on the 6-NH2 group are prepared by treating a biguanide XYNC(:NH)NHC(:NH)NH2, where X is H, alkenyl, aryl, or Y when Y is alkyl and Y is H, or alkyl when X is also alkyl, with a dialkyl aryldicarboxylate or sulfonated derivative or with an alkali-**metal alkyl** aryldicarboxylate. The reaction is conducted in a lower (1-4 C atoms) aliphatic alc. with or without a metal alkoxide condensing agent. The products condensed with CH2O form resins soluble in dilute alkali, which, when applied to textiles and heat-cured, serve as water repellents. To 30 g. biguanide (I) in 100 g. MeOH is added 29 g. o-C6H4-(CO2Me)2. The mixture crystallizes on stirring and the biguanide salt of o-(4,6-diamino-s-triazin-2-yl)benzoic acid, m. 127-8° (from 88% alc.), is filtered off in 75% yield; acidification of an aqueous solution to pH 4 with H2SO4 gives the free acid (II), m. 248-9°. Similarly, an equivalent amount of 2-ethylhexyl Me phthalate, b0.5 151-5° (prepared by distilling MeOH from o-C6H4(CO2Me)2and BuCHEtCH2OH with a trace of p-MeC6H4SO3H), gives 65% II and traces of 2,2' - o - phenylenebis(4,6 - diamino - s - triazine); p-C6H4(CO2C4H9)2 gives 45% 2,2'-p-phenylenebis(4,6-diamino-s-triazine), m. over 300°; and 1,2-C10H6(CO2Me)2 gives a mixture of 1(and 2)-(4,6-diamino-s-triazin-2-yl)-2(and 1)-naphthoic acids. o-C6H4(CO2Me)CO2Na (60.6 g.), 25 g. I, and 6 g. Na in 300 g. MeOH give 94% of the crude Na salt of II which is converted to II in 75% yield. The Na salt of di-Am 4-sulfophthalate (20 g.) added to 6 g. I and 1.6 g. Na in 60 g. MeOH gives 90% of the di-Na salt of 2-(4,6-diamino-s-triazin-2-yl)-4-sulfobenzoic acid. Cf. C.A. 41, 6769d; 42, 2286g.

L8 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1930:34800 CAPLUS
DN 24:34800
OREF 24:3713g-i,3714a
TI Preparation of organic compounds by electrolytic methods. II. Electrolytic reduction processes
AU Glasstone, S.
SO Industrial Chemist and Chemical Manufacturer (1930), 6, 201-5
CODEN: ICCMAE; ISSN: 0367-7133
DT Journal
LA Unavailable
AB Examples are given of reduction reactions illustrative of the principles outlined in C. A. 24, 788. The electrolytic reduction of nitrobenzene in acid and alc. media and the effects of changes in conditions on the products and the yields are given in detail. The reduction of other nitro compds. is dealt with, and the possibilities attendant upon the reduction of mixts. of organic substances is pointed out. The reduction of compds. containing the-CO group by the use of high overvoltage cathodes, e. g., Pb,

Hg, Zn, Cd and Tl is discussed. In general, the reduction of an aliphatic ketonic compound at a Pb cathode in acid solution yields a pinacone and a secondary alc. while in alkaline solution the secondary alc. is the main product. Reduction may proceed to the hydrocarbon, e. g., propane from acetone when a Cd cathode is used. Aliphatic aldehydes are generally reduced to the corresponding alc.. in acid solution at Pb or Hg cathodes. Aromatic ketones generally yield a secondary alc. as the main product in acid, neutral or alkaline solns. Aromatic aldehydes in alkaline solution yield usually hydroxybenzoin derivs. but in acid solution a primary alc. results. A **carboxylic acid** may be reduced electrolytically to the alc. or aldehyde, although a chemical reduction of this type is rarely possible. Fatty acids are not easily reduced, but aromatic acids can be converted to the corresponding alcs. The addition of H to a double bond and to the :C:N- linkage is also dealt with. Possible applications of electroreduction processes to industrial purpose, e. g., the production of azo dyes and **metal alkyl** compds. (e. g., PbEt4), the reduction of soft fats to hard fats are pointed out as well as processes which are already in com. use, e. g., the reduction of indigo to indigo white.

L8 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1928:15145 CAPLUS
DN 22:15145
OREF 22:1769f-i,1770a-c
TI Presumable mechanism of polymerizations by alkali metals (preliminary communication)
AU Ziegler, K.; Bahr, K.
SO Ber. (1928), 61B, 253-63
DT Journal
LA Unavailable
GI For diagram(s), see printed CA Issue.
AB Z. and B. accidentally made an observation which is very probably of material significance in polymerizations produced by alkali metals: alkali metal alkyls can add to conjugated double bonds or double bonds adjacent to a C6H6 nucleus as Grignard reagents add to C:O compds. In an attempt to prepare PhCHKCHKPh (I) from (PhCH:)2 and PhCKMe2 there was obtained, instead of the expected violet-brown I, difficultly soluble in Et2O, an Et2O-soluble, orange-yellow compound (II) converted by CO2 into a mixture of 2 (presumably diastereomeric dl-) α,β,γ-triphenyl-γ-methylvaleric acids (III), whence II must be PhCMe2CHPhCHKPh. This addition of metallo-organic compds. to pure C:C double bonds seems to be a reaction of quite wide applicability. Thus far, PhCKMe2 has been found to add to styrene, Ph2C:CH2, anthracene and (CH2:CMe-)2 but not to cyclohexene. As the resulting K compds. are colored, those obtained from styrene and Ph2C:CH2 probably have the structures PhCHKCH2CMe2Ph and Ph2CKCH2CMe2Ph and for that formed from (CH2:CMe)2 the structure CH2:CMeCKMeCH2CMe2Ph (resulting from 1,2-addition) is given the preference. Finally, the compound formed from anthracene is assigned the structure C6H4CH(CMe2Ph).C6H4.CHK. That these substances are addition products of the metallo-organic compound with the hydrocarbon is shown beyond doubt by the composition of the Ag salts of the CO2H acids obtained from them with CO2. Z. and B. do not wish to imply that addition will always occur at conjugated double bonds or double bonds adjacent to a C6H6 nucleus; perhaps other factors, not yet disclosed by the scant available exptl. data, play a decisive role not all organic K compds. are equally reactive; e. g., Ph3CK shows but slight tendency to add. Again, the **metal alkyl** may act merely as alkali donator, with resulting double decomposition; thus, phenanthrene with PhCKMe2 gives the same compound as was obtained by Schlenk with Na metal. The reaction readily explains how substances of very high mol. weight may be formed, for if a K alkyl, RK, reacts with, say, a butadiene, it forms again a K alkyl, RCH2KCH:CH2, with practically the same reactivity, which can add similarly to another butadiene mol. and the reaction can continue in this way until it is stopped by atmospheric O, traces of impurities or another butadiene mol. reacting according to the Shorigin scheme (RH + R'K = RK + R'H) or because the mols. finally become so large that they react only very sluggishly. The proposed scheme has been intentionally based on 1,2-addition to explain the difference between Na caoutchouc and natural caoutchouc; 1,4-addition would lead to products practically identical with natural rubber. In support of their views, Z. and B. have been able to isolate substances intermediate between the primary addition compound and the

final highly polymerized product. Below is the % of Ag in the salts of the CO_2H acids obtained from the products of PhCKMe2 reacting with: 1 mol. styrene, 25.4; 3 mols., 19.3; 1 mol. (CH2:CMe)2, 29.36; 2 mols., 24.56; 1 mol. stilbene, 24.07; 1 mol. stilbene + 1 mol. styrene, 20.76. III, needles, m. 245-6°, and leaflets, m. 215-6°. α,α,γ-Triphenyl-γ-methylcaleric acid, from the addition product of PhCKMe2 to Ph2C:CH2, m. 154-6° (not quite pure; found for Ag salt, 23.01% Ag). 9-Phenylisopropyl-9,10-dihydroanthracene-10-**carboxylic acid**, from the addition product of PhCKMe2 to anthracene, m. 206-7°. Acid from the addition product of PhCKMe2 to phenanthrene, m. 223-4° (Ag salt, 32.92% Ag).

(FILE 'HOME' ENTERED AT 17:57:48 ON 08 MAY 2006)

FILE 'CAPLUS' ENTERED AT 18:00:43 ON 08 MAY 2006

=> s alkylation and photolysis
95706 ALKYLATION
103424 PHOTOLYSIS
L1 511 ALKYLATION AND PHOTOLYSIS

=> s l1 and carboxylic acid
237385 CARBOXYLIC
4142789 ACID
132188 CARBOXYLIC ACID
(CARBOXYLIC(W)ACID)
L2 8 L1 AND CARBOXYLIC ACID

=> d 1-8 bib abs

L2 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:986132 CAPLUS
DN 143:440613
TI Synthesis of 17-epi-Calcitriol from a Common Androstane Derivative, Involving the Ring B Photochemical Opening and the Intermediate Triene Ozonolysis
AU Kurek-Tyrlik, Alicja; Michalak, Karol; Wicha, Jerzy
CS Institute of Organic Chemistry, Polish Academy of Sciences, Warsaw, 01-224, Pol.
SO Journal of Organic Chemistry (2005), 70(21), 8513-8521
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 143:440613
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB An efficient synthesis of 17-epi-calcitriol (I), an epimer of natural hormone, via 17-epi-cholesterol II is described. Synthesis of II includes palladium-catalyzed cyclopropanation of the common androstane derivative III with an alkyl diazoacetate, reductive fission of the less shielded side of cyclopropane **carboxylic acid** esters, oxidation of the products into acid, and **alkylation** of ester. **Photolysis** of 7,8-dedydro-17-epi-25-hydroxycholesterol and consecutive thermal rearrangement gave a mixture of several products that was subjected to ozonolysis to provide, after chromatog., hydroxy ketone IV. The silyl derivative of IV was coupled with the resp. ring A building block.
RE.CNT 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:965868 CAPLUS
DN 143:413385
TI Sensitization of nanocrystalline TiO2 films with carboxy-functionalized bis(indolyl)maleimide
AU Kaletas, Basak Kuekrer; Kozhevnikov, Valery N.; Zimine, Mikhail; Williams, Rene M.; Koenig, Burkhard; De Cola, Luisa
CS Molecular Photonic Materials, van't Hoff Institute for Molecular Sciences, Universiteit van Amsterdam, Amsterdam, 1018 WV, Neth.
SO European Journal of Organic Chemistry (2005), (16), 3443-3449
CODEN: EJOCFK; ISSN: 1434-193X
PB Wiley-VCH Verlag GmbH & Co. KGaA
DT Journal
LA English
AB The immobilization on a semiconductor surface of a bis(indolyl)maleimide

functionalized with two **carboxylic acid** groups by **alkylation** of the indole nitrogen atoms is presented and its synthesis is described. The compound, 3,4-bis[1-(carboxymethyl)-3-indolyl]-1H-pyrrole-2,5-dione is strongly colored and emissive and the imide part can coordinate an oxidizable substrate. Its absorption and emission spectra on TiO2 are substantially changed as compared to the spectra obtained in neat acetonitrile, indicating surface bonding through the carboxy groups. The quenching of the fluorescence of the sensitizer by the TiO2 surface is almost complete, reflecting the high degree of association between the TiO2 and the dye, fast charge injection and good electronic coupling between the sensitizer and the semiconductor. Nanosecond transient absorption spectra of the free sensitizer and of TiO2 surface bound sensitizer are recorded and compared. While the free chromophore in neat acetonitrile shows a transient absorption spectrum that decays on the nanosecond timescale (like the emission), the transient absorption spectra of the sensitized TiO2 film show a band at 360 nm, and a decay on the microsecond time scale. This is assigned to a slow recombination reaction of the charge-separated state. The properties discussed indicate that the authors system can be considered as a model compound for the development of photocatalysts immobilized on surfaces.

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:854194 CAPLUS
DN 136:216402
TI Synthesis and studies on spectroscopic as well as electron donating properties of the two alkoxy benzo[b]thiophenes
AU Misra, T.; Ganguly, T.; Kamila, S.; Basu, C.; De, A.
CS Department of Spectroscopy, Indian Association for the Cultivation of Science, Calcutta, 700032, India
SO Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy (2001), 57A(14), 2795-2808
CODEN: SAMCAS; ISSN: 1386-1425
PB Elsevier Science B.V.
DT Journal
LA English
OS CASREACT 136:216402
AB Synthesis, characterization, steady state and time resolved, using time correlated single photon counting as well as laser flash **photolysis** techniques, spectroscopic investigations were made for two alkoxy benzo[b]thiophene mols.: 5-methoxybenzo[b]thiophene (5MBT) and 5-(methoxymethoxy)benzo[b]thiophene (5MMBT). In both non-polar n-heptane (NH) and polar acetonitrile (ACN) solvents and at ambient temperature the electronic absorption spectra of these thiophenes exhibit different band systems whose assignments were made from the measurements of the steady state excitation polarization spectra. Steady state fluorescence spectra of these mols. in the different polarity solvents show the presence of non-specific interactions. From the redox properties of the benzothiophenes, measured by cyclic voltammetry, their electron donating properties were observed in the presence of the well-known electron acceptor 9-cyanoanthracene (9CNA). Further, detailed studies by laser flash **photolysis** techniques show that ion-recombination mechanism predominates after the initial excitation of the acceptor moiety using the third harmonic of Nd:YAG laser. This recombination together with the external heavy atom effect (the donor containing 'sulfur' atom) appears to be responsible for the formation of the triplet of the monomeric acceptor 9CNA. From the steady state expts. it is shown that both in non-polar NH and highly polar ACN the quenching in the fluorescence emission of 9CNA in the presence of the benzothiophene donors is brought about primarily by the external heavy atom effect and in ACN, although the presence of the photoinduced ET reaction is confirmed, this process seems, from the observed bimol. dynamic quenching rate, kq, to be significantly masked by the external heavy atom effect.

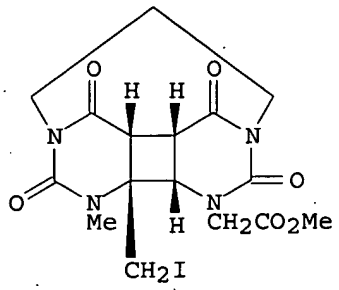
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:648011 CAPLUS

DN 133:296106
TI Enantioselective photoelectrocyclization of a tropolone derivative in the crystalline state
AU Scheffer, John R.; Wang, Letian
CS Department of Chemistry, University of British Columbia, Vancouver, BC, V6T 1Z1, Can.
SO Journal of Physical Organic Chemistry (2000), 13(9), 531-538
CODEN: JPOCEE; ISSN: 0894-3230
PB John Wiley & Sons Ltd.
DT Journal
LA English
AB Achiral tropolone ethers are well known to undergo photochem. induced disrotatory electrocyclic ring closure in solution to form racemic bicyclo[3.2.0]hepta-3,6-dien-2-one derivs. The present paper reports successful efforts to carry out this transformation enantioselectively through the use of the solid-state ionic chiral auxiliary method. In this method, the reactant, an achiral tropolone ether, is equipped with a **carboxylic acid** group to which an optically pure amine can be attached by salt formation. Salt such as these are required to crystallize in chiral space groups, which provide asym. reaction cavities capable of differentiating enantiomeric transition states. Irradiation of these materials in the solid state leads to enantiomerically enriched products in moderate to high enantiomeric excess depending on the amine employed. Of the amines studied, the best results were obtained with 1-phenylethylamine and 1-amino-2-indanol, which gave enantiomeric excesses in the 60-80% range depending on the extent of conversion. Because the tropolone ring is planar, it is suggested that the stereochem. outcome of the electrocyclization in the solid state is governed by environmental crystal lattice effects rather than by the initial conformation of the reactant.
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1998:50046 CAPLUS
DN 128:114560
TI o-Nitrobenzyl as a photocleavable nitrogen protecting group for indoles, benzimidazole, and 6-chlorouracil
AU Voelker, Troy; Ewell, Tim; Joo, Jean; Edstrom, Eric D.
CS Department of Chemistry, University of Montana, Missoula, MT, 59812, USA
SO Tetrahedron Letters (1998), 39(5/6), 359-362
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 128:114560
AB The potential for the o-nitrobenzyl group as an alternative nitrogen protecting group for various indoles, benzimidazole, and 6-chlorouracil was determined Treatment of the appropriate N-H containing substrate with LiH or NaH in DMF followed by o-nitrobenzyl bromide afforded reasonable yields of N-alkylated products. To effect removal of this group, simple **photolysis** with 300 nm light afforded good yields of starting substrate.
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

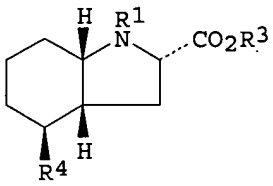
L2 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:559666 CAPLUS
DN 115:159666
TI Mechanistic studies on DNA photolyase. 3. The trapping of the one-bond-cleaved intermediate from a photodimer radical cation model system
AU Burdi, Doug; Begley, Tadhg P.
CS Dep. Chem., Cornell Univ., Ithaca, NY, 14853, USA
SO Journal of the American Chemical Society (1991), 113(20), 7768-70
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
GI



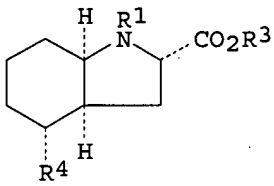
I

AB DNA photolyase catalyzes the monomerization of thymine photodimers in UV-damaged DNA. With the view to developing mechanistic probes for the enzymic reaction, the quinone sensitized cleavage of 6-iodomethyl photodimer model I system was examined This substituent proved to be an efficient trap for the one-bond-cleaved radical intermediate. The x-ray structural parameters for I were determined

L2 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1988:5813 CAPLUS
DN 108:5813
TI Synthesis of 2S,3aS,7aS- and 2S,3aR,7aR-perhydroindole-2-**carboxylic acid** derivatives from L-aspartic acid
AU Barton, Derek H. R.; Guilhem, Jean; Herve, Yolande; Potier, Pierre; Thierry, Josiane
CS Inst. Chim. Subst. Nat., CNRS, Gif-sur-Yvette, 91190, Fr.
SO Tetrahedron Letters (1987), 28(13), 1413-16
CODEN: TELEAY; ISSN: 0040-4039
DT Journal
LA English
OS CASREACT 108:5813
GI



III

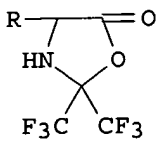


IV

AB **Alkylation** of aspartic acid derivative RNR1CH(CO2CMe3)CH2CO2R2 (I, R = R1 = H, R2 = CH2Ph) with 3-bromocyclohexene gave N-cyclohexenyl derivative I (R = 3-cyclohexenyl, R1 = H, R2 = CH2Ph) in 89% yield. Acetylation or p-bromobenzoylation, followed by basic hydrolysis, gave acids I (R = 3-cyclohexenyl; R1 = Ac, 4-BrC6H4CO; R2 = H), which were converted to N-hydroxy-2-thiopyridone derivs. I [R = 3-cyclohexenyl; R1 = Ac, 4-BrC6H4CO; R2 = 1-(2-thiopyridonyl)] (II). **Photolysis** of II gave radical cyclization products III and IV (R1 = Ac, 4-BrC6H4CO; R3 = CMe3; R4 = 2-pyridylthio) as mixts. of diastereomers in 49-69% yields. Separation and desulfurization of III and IV with Raney Ni gave III and IV (R1 = Bz, R3 = CMe3, R4 = H). The stereochem. of III was determined by a crystal structure. Hydrolysis and re-esterification gave III and IV (R1 = Bz, R3 = Et, R4 = H). Separation desulfurization, and hydrolysis of III and IV (R1 = Ac, R3 = CMe3, R4 = 2-pyridylthio) gave amino acids III and IV (R1 = R3 = R4 = H), which were esterified and p-bromobenzoylated to give III and IV (R1 = 4-BrC6H4CO, R3 = Et, R4 = H).

L2 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1980:76898 CAPLUS
DN 92:76898
TI Carboxyl group-activated α-functionalized **carboxylic**

acid derivatives. I. A new route to methyl esters of N-pyruvoyl amino acids
AU Burger, Klaus; Eggersdorfer, Manfred
CS Org. Chem. Inst., Tech. Univ. Muenchen, Garching, D-8046, Fed. Rep. Ger.
SO Liebigs Annalen der Chemie (1979), (10), 1547-53
CODEN: LACHDL; ISSN: 0170-2041
DT Journal
LA German
OS CASREACT 92:76898
GI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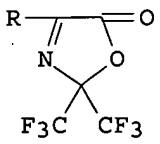
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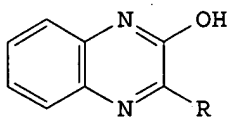
III

AB Oxazolidinones I (R = H, Me2CH, Ph, PhCH2) were dehydrogenated by **photolysis** in the presence of Br2 or by heating with SO2Cl2 to give the oxazolones II. II (R = Me, Et) were prepared by **alkylation** of II (R = H) with CH2N2 or CH3CHN2. II (R = Me) was treated with H-X-OMe (X = Gly, Ala, Val, Phe) to give 50-72% MeCOCO-X-OMe. II (R = Me, Et, Ph, PhCH2) were treated with H2NPh to give RCOCONHPh, and II (R = H, Me, Et, Me2CH, Ph, PhCH2) were cyclized with 1,2-(H2N)2C6H4 to give quinoxalines III. II are carbonyl group protected, carboxyl group activated, α-oxo **carboxylic acid** derivs.

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=>  s l1 and metal alkyl
       1644131 METAL
        567045 ALKYL
          1739 METAL ALKYL
                 (METAL(W)ALKYL)
L3            3 L1 AND METAL ALKYL

=> d 1-3 bib abs
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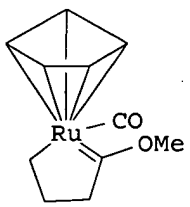
L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:174407 CAPLUS
DN 116:174407
TI Carbene migratory insertions: preparation of the first second-row late-transition-**metal alkyl**-substituted carbene complex and comparison of its migratory insertion with that of its iron analog
AU Trace, Rhonda L.; Sanchez, Javier; Yang, Jing; Yin, Jianguo; Jones, W. M.
CS Dep. Chem., Univ. Florida, Gainesville, FL, 32611-2046, USA
SO Organometallics (1992), 11(4), 1440-2
CODEN: ORGND7; ISSN: 0276-7333
DT Journal
LA English
OS CASREACT 116:174407
GI


I

AB The first stable second-row late-transition-metal carbene complex substituted on the metal with an alkyl group, i.e., ruthenium complex I,

has been prepared Comparison with its iron analog shows carbene migratory insertion in the iron compound to be at least 107 times faster than in the ruthenium complex. This dramatic difference is ascribed to the stronger carbon-metal double bond in the ruthenium complex.

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1987:576164 CAPLUS
DN 107:176164
TI Electronic absorption spectra and photochemical reactivity of Group 5 **metal alkyl** compounds: photochemical α-hydrogen abstraction
AU Chamberlain, Linda R.; Rothwell, Ian P.
CS Dep. Chem., Purdue Univ., West Lafayette, IN, 47907, USA
SO Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1972-1999) (1987), (1), 163-7
CODEN: JCDTBI; ISSN: 0300-9246
DT Journal
LA English
OS CASREACT 107:176164
AB The UV spectra and electrochem. and photochem. behavior of title compds. (RCH2)3MR12 [I; R = H, Me3Si, Ph; M = Nb, Ta; R1 = Cl, OCHMe2, OC6H3Me2-2,6, OC6H3(CHMe2)2-2,6, OC6H3(CMe3)2-2,6] were examined The UV spectra of I are dominated by intense ligand-to-metal charge-transfer (LMCT) bands, the energy of which depends strongly on X. The photochem. of these compds., in some cases leading to the efficient and almost quant. photosynthesis of alkylidene functional groups, was examined Irradiation of Me3Ta[OC6H3(CMe3)2-2,6]2 into the observed LMCT band at 313 nm produces the methylidene complex CH2:TaMe[OC6H3(CMe3)2-2,6]2 and CH4 with a quantum efficiency of 0.95 ± 0.1. Mechanistically the reaction is concerted, while for (Me3SiCH2)3Ta[OC6H3(CHMe2)2-2,6]2, photogeneration of the corresponding alkylidene involves an intermediate alkyl radical which can be intercepted.

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1987:554436 CAPLUS
DN 107:154436
TI The synthesis and structure of Group 5 **metal alkyl** and alkylidene complexes containing 2,6-dialkylphenoxide ligands: x-ray crystal structures of [Ta(OC6H3Me2-2,6)2(CH2Ph)3], [Ta(OC6H3Me2-2,6)4Me], and [Ta(OC6H3Bu-tert2-2,6)2(:CHSiMe3)(CH2SiMe3)]
AU Chamberlain, Linda R.; Rothwell, Ian P.; Folting, Kirsten; Huffman, John C.
CS Dep. Chem., Purdue Univ., West Lafayette, IN, 47907, USA
SO Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1972-1999) (1987), (1), 155-62
CODEN: JCDTBI; ISSN: 0300-9246
DT Journal
LA English
OS CASREACT 107:154436
AB **Alkylation** of Ta(OC6H3R2-2,6)3Cl2 (R = Me, CHMe2) with LiMe, LiCH2SiMe3 or Mg(CH2Ph)2 in C6H6 gave Ta(OC6H3R2-2,6)2(CH2R1)3 (I; R1 = H, SiMe3, Ph). Nb(OC6H3Me2-2,6)2Me3 was also prepared similarly. **Photolysis** of I (R = CHMe2, R1 = SiMe3) gave Ta[OC6H3(CHMe2)2-2,6]2(:CHSiMe3)(CH2SiMe3). **Alkylation** of Ta[OC6H3(CMe3)2-2,6]2Cl3 with LiCH2SiMe3 and Mg(CH2Ph)2 gave Ta[OC6H3(CMe3)2-2,6)2(:CHR1)(CH2R1) (II). The crystal structures of I (R = Me, R1 = H, Ph) and II (R1 = SiMe3) were determined